

REMARKS

The above amendments and below remarks are presented in response to the Office Action of January 2, 2003. No new matter has been entered. Entry of the amendments and reconsideration of the referenced application is respectfully requested.

Election/Restriction

It is confirmed that Claims 1-5, 16-26, and 37-39 have been elected for examination. The remainder of the claims will be cancelled upon allowance of the elected claims.

Claim Rejections – 35 USC 102

Claims 1, 2, 4, 5, 16-21, 23-26 stand rejected under 35 USC 102(b) as being anticipated by Murphy (U.S. Pat. No. 4,958,252).

Claim 1 has been amended to recite that the non-volatile memory within the rating plug stores frame rating and current rating of the circuit breaker. This is not disclosed nor made obvious by Murphy. Although the Examiner asserts on Page 3, line 18 of the Office Action (within the rejection of Claim 16) that Murphy discloses a rating plug having “a non-volatile memory (55) storing current rating of the circuit breaker”, this is not the case. As specifically recited in Murphy in Col. 5, lines 4-19, the EEPROM 55, as clearly shown in FIG. 3, stores the style or model of circuit breaker (register 57), the serial number of the breaker (register 59), the trip history which is the number of trips weighted by a function of the current interrupted by each trip (register 61), and the number of operations of the operating mechanism (register 63). The memory 55 does not store current rating of the circuit breaker as recited. Nowhere within Murphy is it disclosed, suggested, or made obvious to store the current rating or frame rating of the circuit breaker within the memory 55.

The claims cannot be anticipated by Murphy since each and every element is not in the Murphy reference. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, “[t]he identical invention must be shown in as complete detail as is contained in the * * * claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

To anticipate a claim under 35 U.S.C. § 102, a single source must contain all of the elements of the claim. *Lewmar Marine Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 U.S.P.Q.2d 1766, 1768 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1007 (1988).

Furthermore, it is respectfully submitted that it would not have been obvious to alter Murphy to store the current rating or frame rating within the memory 55 in the rating plug without the use of improper hindsight. The memory 55 was placed in the rating plug 7 of Murphy for the sole purpose of placing the rating plug 7 into a programmer 83 for reading the *number of operations* of the operating mechanism and the *number of trips weighted by a function of the current interrupted by each trip*. This is to serve the “needs” expressed in Col. 2, lines 4-18 which includes providing a quantitative measure of service life remaining. Murphy does not disclose, suggest, or make obvious any need for altering the rating of the rating plug. Instead, Murphy is only concerned with using the rating plug for displaying the number of operations and operating history of the circuit breaker, and therefore there is no need or motivation suggested for storing the rating in the memory 55.

Thus, it is respectfully submitted that Murphy does not anticipate or make obvious the features of Claim 1, and therefore does not anticipate the features of the claims which depend upon Claim 1.

Additionally, it is respectfully submitted that Murphy does not disclose, as recited in Claim 2, leads connecting the first and second resistors to the non-volatile memory (where the non-volatile memory is in the rating plug, as recited in Claim 1). The Examiner points to “leads” 4 and 5 (pins), however these pins 4, 5 only connect the resistors to the microcomputer based trip unit 27, and not to the EEPROM 55. While the resistors and the EEPROM 55 are all connected to a common ground, that does not imply that the current rating and frame rating are sent to the EEPROM 55. Murphy clearly describes what is contained in EEPROM 55, and discloses nothing about receiving or storing current rating and frame rating.

As for Claim 4, it is first respectfully noted that it is impossible for Claim 4 to be anticipated by Murphy when Claim 3, on which Claim 4 depends, is admitted by the Examiner as reciting subject matter which Murphy does not disclose.

In addition to Murphy not disclosing an Internet connection, as will be further discussed below with respect to Claim 3, Murphy does not disclose any sort of “*error detection program within the microcomputer, wherein the error detection program*

rejects current ratings greater than the frame rating.” The Examiner’s reference to Col. 5, lines 43-50 has nothing to do with a comparison between current ratings and the frame rating. Instead, this section describes how the trip current value (not the frame rating) is compared to the maximum continuous current (which is the current rating). Additionally, if the trip current value detected by Murphy is found to be greater than the current rating, then a count is made and the magnitude of the trip current is calculated. This does not, in any way, imply that the current rating is rejected, as suggested by the Examiner, and therefore Murphy discloses no sort of program to reject current ratings that are greater than the frame rating as recited in Claim 4.

Additionally, it is respectfully submitted that Murphy does not disclose, as recited in Claim 5, a display for displaying the current rating. The display 89 in Murphy is found on a programmer 83 as shown in FIG. 5, and not anywhere on the circuit breaker 1 as shown in FIGS. 1 and 2. Claim 5 recites that the display for displaying the current rating is included in the circuit breaker. As display 89 of Murphy is clearly not part of the circuit breaker, Claim 5 cannot be anticipated by Murphy. Additionally, display 89 does not display current rating. Instead, display 89 is disclosed as displaying the data in the respective registers of the EEPROM. As discussed above with respect to Claim 1, these registers include style or model of circuit breaker (register 57), the serial number of the breaker (register 59), the trip history which is the number of trips weighted by a function of the current interrupted by each trip (register 61), and the number of operations of the operating mechanism (register 63). Since Murphy does not disclose display 89 anywhere on the circuit breaker and does not disclose display 89 displaying current rating of the circuit breaker, then Claim 5 cannot be anticipated by Murphy.

As for Claim 16, which remains unamended, the Examiner states that the rating plug of Murphy discloses *“a non-volatile memory (55) storing current rating of the circuit breaker, wherein information regarding current is sent by the rating plug to the electronic trip unit in digital form only.”* As for Claim 23, which has been amended to remove extraneous subject matter not necessary to define the invention over the prior art and to correct a spelling error, the Examiner further states that Murphy discloses *“a non-volatile memory 55 storing the current rating of the circuit breaker.”* Applicants respectfully disagree. As discussed above with respect to claim 1, the EEPROM 55 of Murphy et al stores style or model of circuit breaker (register 57), the serial number of the breaker (register 59), the trip history which is the number of trips weighted by a

function of the current interrupted by each trip (register 61), and the number of operations of the operating mechanism (register 63). The EEPROM 55 is not disclosed as storing the current rating. Therefore, Murphy et al does not anticipate Claim 16.

Additionally, Claim 16 recites that the current rating is sent to the etu in digital format only. The use of resistors in the rating plug of Murphy et al would indicate that the rating is sent using analog signals, and therefore Murphy et al again does not anticipate Claim 16 as Murphy et al does not send current rating in digital format only.

For at least these reasons, it is respectfully submitted that Claims 16 and 23 and the claims which depend upon claims 16 and 23 define over Murphy et al.

It is also respectfully noted that since Claims 16-21 remain unamended, a second office action may not be made final should the Examiner apply a new grounds of rejection to Claims 16-21.

As for claims 17 and 25, the Examiner states that Murphy discloses "*that the rating plug comprises a label 89*". Applicants respectfully disagree. Display 89 is not found on the rating plug 7, but on the programmer 83. Claim 17 specifically recites a label attached to the housing (of the rating plug) for indicating the current rating. There is no label attached to the rating plug 7, nor is there any indication of the current rating on the rating plug 7, not the display 89 of the programmer 83. Thus, Murphy et al cannot anticipate Claims 17 and 25.

As for Claims 18 and 26, the Examiner states that the "label" 89 includes a "bar code" 23. Again, Applicants must respectfully disagree. Item 23 in Murphy et al is not a bar code, as is well known in the industry and defined by "The Merriam Webster Dictionary", 1997, as follows: *bar code n : a set of printed and variously spaced bars and sometimes numerals that is designed to be scanned to identify the object it labels*. There is no other definition of "bar code". Therefore, the trip bar 23 of Murphy et al cannot possibly anticipate a bar code. Furthermore, the trip bar 23 has absolutely nothing to do with the display 89 on the programmer 83, nor is the trip bar 23 included on the display 89, nor would it make any sense to do so (how could part of a trip mechanism be included on a digital display?). For at least these reasons, it is respectfully requested that the rejection of claims 18 and 26 be withdrawn.

As for Claims 21 and 24, the Examiner points to the housing 3 which is of the circuit breaker 1, and not of the rating plug 7. Inevitably, the rating plug 7 must include some sort of housing, as is shown in FIG. 5, however, Murphy et al is silent to the

material of the such a housing, and therefore Murphy et al cannot anticipate Claims 21 and 24 which state that the housing is a plastic case.

In view of the above points, it is respectfully submitted that Murphy et al does not anticipate claims 1, 2, 4, 5, 16-21, and 23-26 as suggested, and therefore it is further respectfully submitted that these claims, and the claims which depend therefrom, patentably define over the prior art.

Claim Rejections – 35 USC 103

Claims 3 and 37-39 stand rejected under 35 USC 103(a) as being unpatentable over Murphy in view of Santos et al (USPN 2001/0000355).

Claims 3 and 37 have been amended to correct the spelling of “internet” to -- Internet --.

The Examiner admits that Murphy does not disclose an Internet connection, and turns to Santos et al as disclosing an Internet connection (FIG. 2, item 72).

Applicants respectfully contest this rejection for at least the following reasons:

First, the Examiner’s attention is kindly directed to 35 U.S.C. 103(c) which states:

(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

The Examiner’s attention is further directed to MPEP 706.02(1)(2), which states:

“Application X and Patent A were, at the time the invention of Application X was made, owned by Company Z.”

This statement alone is sufficient evidence to disqualify Patent A from being used in a rejection under 35 U.S.C. 103(a) against the claims of Application X.

Thus, in a clear and conspicuous manner, the undersigned respectfully submits the following:

EVIDENCE TO ESTABLISH COMMON OWNERSHIP

U.S. Patent Application No. 09/660,876 and U.S. Patent Application No. 09/727,880 were, at the time the invention of U.S. Patent Application No. 09/660,876 was made, owned by General Electric Company.

Thus, in view of the unavailability of the Santos et al reference for this rejection, it is respectfully submitted that this rejection is rendered moot.

Although the Santos et al reference is not available for this rejection, it is further respectfully submitted that the rejection is not proper for lacking feasibility. Claim 3 and Claim 37 recite “*wherein the current rating of the circuit breaker may be changed via the Internet connection.*” Even if an Internet connection were added to the circuit breaker of Murphy, one would not be able to change the current rating of the circuit breaker because the current rating of the circuit breaker of Murphy is only provided via resistor 45. It is not understood how the current rating in the resistor 45 could be altered via the Internet? The Examiner only offers that “*It would have been obvious to one having skill in the art at the time the invention was made to modify the circuit breaker of Murphy with an internet connection as taught by Santos et al. in order to provide increased functionality to the trips unit by enabling upgrades and servicing of the strip unit by downloading firmware to it*”. This does not disclose or suggest how the current rating can be changed via such an Internet connection in Murphy. Because Murphy uses only resistors for current rating, Murphy does not disclose, nor make possible, the missing recited elements. Thus, it is respectfully submitted that it would not have been obvious to provide an Internet connection for changing the current rating of the circuit breaker of Murphy, and therefore it is further respectfully submitted that Claims 3 and 37-39 patentably define over the prior art.

Allowable Subject Matter

It is noted with appreciation that claim 22 has been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 22 has been rewritten in independent form, and therefore it is respectfully submitted that Claim 22 is in allowable condition.

CONCLUSION

This, it is respectfully submitted that all of the Examiner's rejections have been addressed and it is further respectfully submitted that all of the pending claims, Claims 1-5, 16-26, and 37-39 are allowable over the prior art and allowance is respectfully requested.

If, however, any issues remain, the Examiner is cordially invited to contact the undersigned so that any such issues may be promptly resolved.

Although fees are dealt with in an accompanying sheet, if there are any additional charges with respect to this Amendment and Response, please charge them to Deposit Account No. 06-1130 maintained by Applicants' Attorneys.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: MICHAEL S. TIGNOR et al.)
Serial No: 09/660,876) Group Art Unit:
Filed: September 13, 2000) 2836
For: WORLD WIDE WEB ENABLED AND DIGITAL)
RATING PLUG) Examiner:
Danny Nguyen

Version with markings to show changes made

A “marked up” version of claim 1 follows:

“1. (Amended/Marked up) A circuit breaker for an electrical circuit comprising:

an operating mechanism for interrupting current in the electrical circuit when operated;

an electronic trip unit including a microcomputer which monitors the current in the electrical circuit and generates a trip by automatically operating the operating mechanism to interrupt the current in the electrical current when the current exceeds a selectable value; and,

a rating plug having means establishing the selectable value of the current at which the electronic trip unit trips the operating mechanism, and a non-volatile memory[, the rating plug further having means for] storing frame rating and current rating of the circuit breaker [in the non-volatile memory].”

A “marked up” version of Claim 3 follows:

“3. (Amended/Marked up) The circuit breaker of claim 1 further comprising an [internet] Internet connection extending from the microcomputer, wherein the current rating of the circuit breaker may be changed via the [internet] Internet connection.”

A “marked up” version of Claim 22 follows:

“22. (Amended/Marked up) [The rating plug of claim 16] A plug-in digital rating plug for an electronic trip unit of a circuit breaker, the rating plug comprising:
a housing;
a connector for connecting the rating plug to the electronic trip unit; and,
a non-volatile memory storing current rating of the circuit breaker, wherein
information regarding current rating is sent by the rating plug to the electronic trip unit in
digital format only, and wherein the rating plug contains no resistors relating to current rating or frame rating of the circuit breaker.”

A “marked up” version of Claim 23 follows:

“23. (Amended/Marked up) A circuit breaker for an electrical circuit comprising:
an electronic trip unit including a microcomputer;
a removable digital rating plug having a [non-volatile] non-volatile memory storing current rating of the circuit breaker;
a connector for connecting the rating plug to the electronic trip unit;
[a connection lead extending within the connector directly connecting the electronic trip unit with the non-volatile memory;]
wherein the current rating of the circuit breaker is determined exclusively by the non-volatile memory of the rating plug.”

A “marked up” version of Claim 37 follows:

“37. (Amended/Marked up) A circuit breaker for an electrical circuit comprising:

an operating mechanism for interrupting current in the electrical circuit when operated;

an electronic trip unit including a microcomputer which monitors the current in the electrical circuit and generates a trip by automatically operating the operating mechanism to interrupt the current in the electrical current when the current exceeds a selectable value;

a non-volatile memory [for] storing frame rating and current rating of the circuit breaker; and,

an [internet] Internet connection extending from the microcomputer, wherein the current rating of the circuit breaker may be changed via the [internet] Internet connection.”